

# The Analysis of Profit and Cost Centres in the Value Chain - A Case of the Croatian Wood Manufacturing Company -

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## Abstract

This paper explores the importance of the value chain concept by analysing profit and cost centres in a selected wood manufacturing company in Croatia. First, we performed a SWOT analysis of Croatian wood industry with a brief overview of financial reporting practice. Then, a model is constructed by applying the basic principles of IAS accounting postulates on segment reporting and joint venture. It suggests financial reporting form that could facilitate value added tracking within the wood manufacturing company and the industry as a whole.

**Keywords:** value chain, wood manufacturing industry, financial reporting, Croatia

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## 1 Introduction

Wood cluster issue, though very popular among policy makers in Croatia, has remained a rather fashionable topic instead of being a tool for the reorganisation, reconstruction and competitiveness enhancement of the wood manufacturing industry. Cluster is a type of industrial organisation that implies a strong partnership between policy makers and manufacturers. It is designed to overcome problems and meet the market criteria of competitiveness. Although the cluster as a model has been applied successfully in several European countries such as Finland, Sweden, Italy, Austria, Slovenia, its ever-lasting idea of partnership has been exploited in Latin American economies and other states as well.

Research papers that examine the role of cluster have been rather rare in Croatia. Nevertheless, there are initiatives for cluster creation in some sectors, particularly in struggling wood manufacturing industry whose share in GDP is now a meagre 1,5%<sup>1</sup>. This paper starts with a brief SWOT analysis of Croatian wood manufacturing and proceeds with an insight into current financial reporting practice. However, the aim of the paper goes beyond generally accepted financial reporting practice through exploring the role of financial reporting in value added chain, and positive multiplication effects it could generate not only for wood industry but Croatian industry as a whole.

## 2 Data and Methods

The data used here includes both annual financial statements and physical data of Croatian wood manufacturer, which remains anonymous for the purpose of this research<sup>2</sup>.

The hypothesis we formulate is as follows: financial reports in Croatia are outdated and without information on production process and value added products of the company. As such, they, in our opinion, cannot serve as a sound basis for neither financial reporting nor decision making within the wood cluster. Therefore we tried to combine physical and financial data in the model constructed in order to propose a possible move to activity-based accounting practice.

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<sup>1</sup> *Industrijska strategija*, [www.vlada.hr/Download/2003/10/09/pog15.pdf](http://www.vlada.hr/Download/2003/10/09/pog15.pdf), pp. 7-8.

<sup>2</sup> *We are grateful to the company's staff for providing us with the information we requested.*

### 3 SWOT Analysis and Current Financial Reporting Practice Overview

Problems and perspectives of the Croatian wood industry are mainly pinpointed in the analysis of strengths, weaknesses, opportunities and threats (Table 1).

Table 1. <b>SWOT analysis of Croatian wood industry</b>
<b>STRENGTHS</b>
Valuable hardwood species
FSC certification of forests
81.5% forests in state ownership
Strengthening of the road network and key port of Rijeka in proximity
Traditionally good reputation of Croatian wood and some wooden products
<b>WEAKNESSES</b>
Obsolete technology
No permanent training of workers to acquaint them with new technology
Lack of working and investment capital for R&D
Bureaucratic procedures and unfavourable loan terms
Strong dependence on suppliers and thus vulnerability to FX rate changes
Low income and low motivation of forest industry workers
High transport costs
Excess capacity of saw mills as opposed to capacities in later phases of production
Unattractive and no space-friendly design of final products
<b>Uninformative financial statements and lack of good financial reports presentation</b>
Lack of promotional activities
High re-export of Croatian prime round wood
Inadequate and old-fashioned legislation
Lack of organised long-term reforestation policy
<b>OPPORTUNITIES</b>
Flexible order-oriented production for construction and publishing industry, shipbuilding, tourism and agriculture
Strong demand for high quality wooden products in Asia, Western Europe and the USA
Horizontal and vertical integration within the industry
<b>Strengthening industrial partnerships by timely and more detailed financial records presentation</b>
Organised supply market in partnership with the state
Full capacity utilisation by jointly organised import of insufficient raw materials
Rural areas development and employment growth
Regular market analysis and value added creation commensurate with consumer needs and fashion trends
Better cooperation with R&D institutions
Sustainable and domestic production-friendly forest management establishment
<b>THREATS</b>
Ever-changing public strategies for forest management
Rural depopulation
Demand increase for tropical wood species
Lack of confidence in public policies
Inadequate training programmes
Acid rains and pests endangering forest treasure, particularly softwood

Starting with the common statement that “the chain is as strong as its weakest part” we aim to propose the change of financial reports preparation for each cluster member to facilitate the value added monitoring within the wood cluster. Before moving on to activity-based financial reporting, that is to be proposed, a brief explanation of current financial reporting practice in Croatia is given, with focus on some of its key drawbacks.

The existing domestic financial reporting is based on International Accounting Standards and The Accounting Law<sup>3</sup>. Accordingly, the companies are obliged to present their financial records once a year in an officially set form, which varies depending upon the size of the company. The information is grouped under broad asset, liability, cost and revenue categories that contain only lump sums and do not separate the activities that generate value added from those that tend to lose it. This is especially true when SME sector is concerned.

The fact that it often takes a couple of months for financial statements to be published makes the financial records worthless in terms of useful information for any purpose but tax considerations. Consequently, the majority of financial statement users end up without worthy information. This particularly holds true for business partners who have difficulty in spotting business allies or products of a special interest.

The company whose internal organisation and financial reports we examined for the analysis in this paper is a middle-size wood manufacturer, with parquetry as a main production line and oak parquet as principal value added product. The most recent income statement of the Company (Table 2) is, at the same time, the sample of current income statement presentation practice.

Our comment on such a form of income statement is summarised as follows:

- Geographically divided sales serve as the basis for segment reporting; yet they do not provide insight into the core value added business activities.
- Such a reduced form of financial statements for SMEs gives only the rough idea of whether the company achieved gain or loss in the reporting period.
- Additionally, the fact that such reports have to be presented just once a year and only occasionally audited, puts further a doubt into their relevance and reliability.

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<sup>3</sup> *Official Gazette of the Republic of Croatia, No. 53/91, 33/92* [www.nn.hr](http://www.nn.hr)

No.	Description	2001	2002	2003
1	Operating revenues	22,204,458	24,375,145	22,611,489
1.1	Revenues from product sale in the country	12,761,782	13,284,341	10,184,310
1.2	Revenues from product sale abroad	9,113,676	9,280,931	9,975,416
1.3	Revenues from goods sale in the country	0	28,042	7,628
1.4	Revenues from goods sale abroad	0	1,764,529	2,033,605
1.5	Other revenues	329,000	17,302	410,530
2	Operating expenses	20,977,809	23,044,299	21,604,304
2.1	Change in inventory value	-2,034,476	873,998	510,612
2.2	Cost of raw materials	12,605,920	11,275,312	9,312,551
2.3	Cost of goods sold	1,296,142	1,601,957	1,875,297
2.4	Services and other expenses	1,182,380	1,609,235	1,387,950
2.5	Labour cost	5,198,346	5,040,405	5,169,637
2.6	Depreciation	1,068,219	967,083	1,091,772
2.7	Administrative and general costs	1,661,278	1,676,309	2,256,485
3	Financial revenues	504,572	126,201	120,225
4	Financial expenses	1,332,019	1,412,283	1,231,388
5	Extraordinary revenues	325,575	140,112	430,205
6	Extraordinary expenses	289,082	44,702	33,169
7	Total revenues (1+3+5)	23,034,605	24,641,458	23,161,919
8	Total expenses (2+4+6)	22,598,910	24,501,284	22,868,861
9	Income (loss) before tax	435,695	140,174	293,058
10	Income tax (20%)	87,139	28,035	58,612
11	Other taxes than income tax	0	0	0
12	Net gain (loss)	348,556	112,139	234,446
13	Dividend	0	0	0
14	Retained earnings	348,556	112,139	234,446
15	Number of employees	98	94	93

## 4 Model Description

Following the principle that physical data cannot be separated from financial data in the production company, we aim to combine information at hand in our lengthened model of the income statement (Table 3).

Table 3 presents the potential income statement model for a specific cluster member. The selected company is already internally organised into profit and cost centres with Sales as both profit and cost centre, and Production and Management and Administration departments as pure cost centres. However, to obtain the desired information on value added products, the Sales centre is further divided into smaller organisational units.

Conceptually, the basic principles of segment reporting are applied, as prescribed in the International Accounting Standard (here on IAS) No.14, with business segment, e.g. products according to production phases, as the primary one, and the geographical segment, e.g. domestic and foreign sales, as the secondary one (see column I, table 3).

According to IAS 14, a segment is reportable if a majority of its revenue is earned from sales to external customers, and if its revenue is 10 per cent or more of total revenue; or if its result (either profit or loss, whichever is the greater in absolute amount) is 10 per cent or more of the combined result of all segments. Moreover, the total revenue attributed to reportable segments must be at least 75 per cent of the total consolidated revenue. If it is less than 75 per cent, additional segments are identified as reportable segments until at least 75 per cent of total revenue is included in reportable segments<sup>4</sup>.

Table 3 follows the pattern of functional income statement presentation as shown by column I, except that all revenues and costs are split between profit/cost centre Sales and cost centres Production and Management and Administration. The mark N/A within the table stands instead of the data that are not available, while the hyphen marks the fields that should not be fulfilled or that cannot be calculated, e.g. m2 and m3 sales quantities in column XII.

Columns II to XI and column XIII represent the production workflow according to production phases, e.g. sawn timber, sawn-mill elements and parquetry. This analytics combines the inventory categories from the balance sheet (not included in the paper), in both physical and financial terms, with the income statement items such as cost of goods sold (row 34).

Although the table looks somewhat confusing at the first sight, the text on the grey background relies on pure income statement items whereas the text on the white background enables the tracking of the physical and financial flow of production, from the raw materials entering the production process through their transformation into the final product backlogs at the end of each production phase.

Due to the lack of data at hand it is assumed that there are no starting inventories of raw materials at the beginning of the first production phase, e.g. sawn timber (see column II, rows 3, 6). The second assumption is that the company itself produced sufficient quantity of final products that are to be sold in the next period or used as the starting inventories for the next production phase as shown in column XIII.

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<sup>4</sup> *Web Summaries IAS 14: Segment Reporting,*

[http://www.iasb.org/uploaded\\_files/documents/8\\_63\\_ias14-sum.pdf](http://www.iasb.org/uploaded_files/documents/8_63_ias14-sum.pdf).

<sup>5</sup> *Web Summaries IAS 31,* [http://www.iasb.org/uploaded\\_files/documents/8\\_63\\_ias31-sum.pdf](http://www.iasb.org/uploaded_files/documents/8_63_ias31-sum.pdf).

No.	Production process / Income statement items	Raw material inventory at the period- beginning	Raw material cost at the period- beginning	Raw material purchase in the period	Raw material cost in the period	Total raw materials available for production in the period	Total raw material costs in the period	% of total raw materials produced in the previous phase of production	Total finished products inventory at the period- beginning	Total quantity of finished goods in the period	Total quantity produced entering raw materials	Total sales in the period	Total quantity available for sale or next production phase at the period-end	Total quantity sold as a % of total finished products	Total amount	Total capacity utilisation in the period	Capacity utilisation as a % of total capacity available
	I	II	III	IV	V	VI(II+IV)	VII	VIII	IX	X	XI	XII	XIII (IX+X) XIV	XIV (XIII+X)	XV	XVI	XVII
		m3	kn	m3	kn	m3	kn	%	m3/m2	m3/m2	%	m3/m2	m3/m2	%	m, kn	m3	%
1	<b>SALES (2+9+16)</b>	7,566	N/A	12,883	N/A	20,449	N/A	-	-	-	-	-	-	-	22,611	-	-
2	SAWN TIMBER (3+6)	0	N/A	11,635	N/A	11,635	N/A	-	0	8,522	73.2%	3,363	5,159	39.5%	N/A	N/A	N/A
3	Oak	0	N/A	5,749	N/A	5,749	N/A	-	0	4,240	73.8%	440	3,800	10.4%	N/A	N/A	N/A
4	Domestic	-	-	-	-	-	-	-	-	-	-	25	-	0.6%	N/A	-	-
5	Foreign	-	-	-	-	-	-	-	-	-	415	-	-	9.8%	N/A	-	-
6	<b>Beech</b>	0	N/A	5,886	N/A	5,886	N/A	-	0	4,282	72.7%	2,923	1,359	68.3%	N/A	N/A	N/A
7	Domestic	-	-	-	-	-	-	-	-	-	-	692	-	16.2%	N/A	-	-
8	Foreign	-	-	-	-	-	-	-	-	2,231	-	-	-	52.1%	N/A	-	-
9	SAWN-MILL EL. (10+13)	4,737	N/A	0	N/A	4,737	N/A	-	422	2,558	54.0%	151	2,829	5.1%	N/A	N/A	N/A
10	Oak	3,477	N/A	0	N/A	3,477	N/A	82.0%	323	1,915	55.1%	0	2,238	0.0%	N/A	N/A	N/A
11	Domestic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	Foreign	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	<b>Beech</b>	1,260	N/A	N/A	N/A	1,260	N/A	29.4%	99	643	51.0%	151	591	20.4%	N/A	N/A	N/A
14	Domestic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	Foreign	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	PARQUETRY (17 + 27 + 30)	2,829	N/A	1,248	N/A	4,077	N/A	N/A	13,761	141,802	-	130,317	25,247	83.8%	20.2	N/A	N/A
17	<b>Oak all classes (18 + 21 + 24)</b>	2,238	N/A	1,102	N/A	3,340	-	174.4%	13,761	118,462	-	128,435	3,788	97.1%	N/A	-	-
18	1. class (32,4m2/m3)	N/A	N/A	N/A	N/A	2,752	-	-	13,761	89,165	-	102,926	0	100.0%	N/A	-	-
19	Domestic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	Foreign	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	<b>2. class (48,9m2/m3)</b>	N/A	N/A	N/A	N/A	405	N/A	N/A	0	19,805	-	17,013	2,792	85.9%	N/A	N/A	N/A
22	Domestic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	Foreign	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	<b>3. class (51,2m2/m3)</b>	N/A	N/A	N/A	N/A	183	N/A	N/A	0	9,370	-	8,496	874	90.7%	N/A	N/A	N/A
25	Domestic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	Foreign	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

No.	Production process / Income statement items	Raw material inventory at the period- beginning	Raw material cost at the period- beginning	Raw material purchase in the period	Total raw material cost in the period	Total raw materials available for production in the period	Total raw material costs in the period	% of total raw materials produced in the phase of production	Total finished products inventory at the period- beginning	Total quantity of finished goods in the period	Total quantity produced as a % of entering raw materials	Total sales in the period	Total quantity available for sale or next production phase at the period- end	Total quantity sold as a % of total finished products	Total amount utilised in the period	Capacity utilisation as a % of total capacity available	
		II	III	IV	V	V(I+IV)	VII	VIII	IX	X	XI	XII	XIII (IX+X)- (XII)/(IX+X))	XIV (XII)/(IX+X))	XV	XVI	XVII
		m3	kn	m3	kn	m3	kn	%	m3/m2	m3	%	m3/m2	m3/m2	%	m.kn	m3	%
27	<b>Beech parquet 1. class</b> (31,5m2/m3)	591	N/A	42	N/A	633	N/A	98.4%	0	19,940	-	14,499	5,441	72.7%	1,667	N/A	N/A
28	Domestic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	Foreign	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	<b>Other parquet types</b> (average 32,7m2/m3)	0	N/A	104	N/A	104	N/A	N/A	0	3,401	-	1,882	1,519	55.3%	0,169	N/A	N/A
31	Domestic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	Foreign	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33	<b>PRODUCTION COSTS</b> (34+44+45+46+47+48)	-	-	-	-	N/A	N/A	-	-	-	-	-	-	-	-	-	-
34	COST OF GOODS SOLD (35+38+41)	-	-	-	-	-	-	-	-	-	-	-	-	-	1,875	-	-
35	<b>Sawn timber</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	N/A	-	-
36	Oak sawn timber	-	-	-	-	-	-	-	-	-	-	-	-	-	N/A	-	-
37	Beech sawn timber	-	-	-	-	-	-	-	-	-	-	-	-	-	N/A	-	-
38	<b>Sawn-mill elements</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	N/A	-	-
39	Oak sawn-mill elements	-	-	-	-	-	-	-	-	-	-	-	-	-	N/A	-	-
40	Beech sawn-mill elements	-	-	-	-	-	-	-	-	-	-	-	-	-	N/A	-	-
41	<b>Parquetry</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	N/A	-	-
42	Oak parquetry	-	-	-	-	-	-	-	-	-	-	-	-	-	N/A	-	-
43	Beech parquetry	-	-	-	-	-	-	-	-	-	-	-	-	-	N/A	-	-
44	R&D EXPENSE	-	-	-	-	-	-	-	-	-	-	-	-	-	N/A	-	-
45	DEPRECIATION OF PRODUCTION CAPACITIES	-	-	-	-	-	-	-	-	-	-	-	-	-	N/A	-	-
46	LABOUR COST	-	-	-	-	-	-	-	-	-	-	-	-	-	N/A	-	-
47	OVERHEADS	-	-	-	-	-	-	-	-	-	-	-	-	-	N/A	-	-
48	SERVICES AND OTHER EXPENSES	-	-	-	-	-	-	-	-	-	-	-	-	-	N/A	-	-



No.	Production process / Income statement items	Raw material inventory at the period- beginning	Raw material cost at the period- beginning	Raw material purchase in the period	Total raw material cost in the period	Total raw materials available for production in the period	Total raw material costs in the period	% of total raw materials produced in the previous phase of production	Finished products inventory at the period- beginning	Total quantity of finished goods in the period	Total quantity produced as a % of raw materials entering the period	Total sales in the period	Total quantity available for sale or next production phase at the period-end	Total quantity sold as a % of total finished products	Total amount in the period	Total capacity utilisation in the period	Capacity utilisation as a % of total capacity available
	I	II	III	IV	V	V/(I+IV)	VII	VIII	IX	X	XI	XII (2+9+1 6)	XIII ((IX+X)- XII)	XIV (XII/(IX+X))	XV	XVI	XVII
		m3	kn	m3	kn	m3	kn	%	m3/m2	m3	%	m3/m2	m3/m2	%	m.kn	m3	%
49	SALE S&M/MGMT/DIV EXPENSE(55+58+61+64)	-	-	-	-	-	-	-	-	-	-	-	-	-	N/A	-	-
50	LABOUR COST	-	-	-	-	-	-	-	-	-	-	-	-	-	N/A	-	-
51	Sales division	-	-	-	-	-	-	-	-	-	-	-	-	-	N/A	-	-
52	Management div.	-	-	-	-	-	-	-	-	-	-	-	-	-	N/A	-	-
53	DEPRECIATION	-	-	-	-	-	-	-	-	-	-	-	-	-	N/A	-	-
54	Sales capacities	-	-	-	-	-	-	-	-	-	-	-	-	-	N/A	-	-
55	Management buildings	-	-	-	-	-	-	-	-	-	-	-	-	-	N/A	-	-
56	OVERHEADS	-	-	-	-	-	-	-	-	-	-	-	-	-	N/A	-	-
57	Sales division	-	-	-	-	-	-	-	-	-	-	-	-	-	N/A	-	-
58	Management div	-	-	-	-	-	-	-	-	-	-	-	-	-	N/A	-	-
59	SERVICES EXPENSES	-	-	-	-	-	-	-	-	-	-	-	-	-	N/A	-	-
60	Sales	-	-	-	-	-	-	-	-	-	-	-	-	-	N/A	-	-
61	Management Div.	-	-	-	-	-	-	-	-	-	-	-	-	-	N/A	-	-
62	FINANC. REVENUES	-	-	-	-	-	-	-	-	-	-	-	-	-	0.12	-	-
63	FINANC. EXPENSES	-	-	-	-	-	-	-	-	-	-	-	-	-	1.231	-	-
64	INCOME FROM CONT.OPERATIONS (1-33- 49+62-63)	-	-	-	-	-	-	-	-	-	-	-	-	-	N/A	-	-
65	INCOME TAX	-	-	-	-	-	-	-	-	-	-	-	-	-	N/A	-	-
66	NET RESULT FROM CONT. OPERATIONS	-	-	-	-	-	-	-	-	-	-	-	-	-	N/A	-	-
67	NET RESULT FROM DISCONT.OPER.	-	-	-	-	-	-	-	-	-	-	-	-	-	N/A	-	-
68	EXTRAORDINARY RESULT NET OF TAX	-	-	-	-	-	-	-	-	-	-	-	-	-	0.293	-	-
69	ADJUSTMENTS FOR ACQUIN. PRINC. CHANGE NET OF TAX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 3. A model of income statement for value added products monitoring - continued

The total quantity in column XIII, e.g. row 3, reduced by starting raw materials inventory for the second production phase, e.g. column II, row 10, equals the total finished products inventory at the end of the second production phase or at the beginning of the next production phase, as evidenced by column IX, row 10. Columns XVI and XVII are deliberately included for the monitoring of total capacity utilisation during the normal working hours of the factory. The excess capacity utilisation reveals the possible problems in the supply chain; the same being one of main problems in the Croatian wood manufacturing industry.

For easier analysis of the physical workflow, numbers are included in percentages, whereas financial data are given for easier cost evidence. The foreign and domestic market sales are taken into account only in columns XII, XIV and XV. When the products are sold, the cost of raw materials used for their production should be transferred into cost of goods sold as can be seen in the row 34. Yet the category of production costs is much broader as it includes not only the cost of goods sold, but also the R&D expense, depreciation expense of production capacities, labour cost, overheads as well as services such as maintenance of production capacities.

After the costs for Sales and Management and Administration division as well as financial revenues and expenses, the emphasis is put on the income from continuing operations as it is the category that is the most meaningful, as far as regular production, sales and administration activities are concerned.

In such a model of income statement, financial data are not only combined with physical but they also set the sound basis for decision making in both real and financial terms. Not only the sales profitability in both domestic and foreign market is measured revealing which products obtain the most value added, but also the degree of product finalisation, the capacity utilisation, the inventory management process and consequently the demand for end-product types. Moreover, this model might also be a controlling instrument for products of low finalisation grade export.

The model benefits are even more expanded on an aggregate level. Simple consolidation of the income statements for all cluster members, with the physical and financial data of all production phases in the industry, gives the opportunity to the State as a key supplier and partner in the wood value chain to introduce the legal and practical measures either targeted to some subdivisions of the wood industry or to the industry as a whole.

The role of partnership is stressed further as a platform for various SMEs integration in the same or different phases of production. This way of financial presentation, especially if provided on a frequent basis, enables the business-networking concept, commonly known as joint ventures, to take place. Joint ventures can be classified as jointly controlled operations, jointly controlled assets and jointly controlled entities. As prescribed by IAS No. 31, a venturer recognises its interest in a jointly controlled operation by recognising in its financial statements on a proportional basis the assets that it controls, its share of liabilities or expenses incurred jointly, and any income from the sale or use of its share of the joint output<sup>5</sup>. By adding the joint venture entities in the income statement consolidation on the aggregate level, some significant errors in aggregate accounting and statistics can be omitted. Needless to say, a venturer discontinues proportionate consolidation from the date that it ceases to have joint control over a jointly controlled entity.

Thanks to temporary performance capabilities of IT technology, more complicated financial reporting is more time-friendly oriented. There are numerous studies that address the need for timely information by addressing the issue of quarterly, semi-annual and annual reporting, but this paper is focused exclusively on decision-making benefit.

Growing number of companies are introducing the concept of quarterly reporting even though they are not obliged to, to stress their role in the industry and gain investors' confidence. Despite the fact that most Croatian wood manufacturers are not listed on the stock exchange or are not regularly traded, e.g. only 7 companies are listed on the Zagreb Stock Exchange<sup>6</sup> and 14 companies at the Varaždin Stock Exchange<sup>7</sup>, the more frequent financial reporting would be highly beneficial for mutual confidence establishment between the State and manufacturers in the wood cluster.

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<sup>6</sup> <http://www.zse.hr/quotation.php?sessionId=-1>

<sup>7</sup> <http://www.vse.hr/kotacije/popis>

## 5 Conclusion

In this paper we address the importance of having more informative, detailed and updated financial reporting within Croatian wood industry cluster. We set the hypothesis that financial papers in Croatia do not provide enough information on production process and value added products in a certain company. Therefore, we tried to combine physical and financial data of a Croatian wood manufacturer and construct a model that may serve as a proposal for members of Croatian wood industry cluster to move to activity-based accounting practice.

The findings of this paper should be thought of as a preliminary contribution to the issue of the importance of the value chain financial reporting. It is of a high importance to point out that this paper's attention was not to conduct pre and post experiment and show the result, yet to propose a model that could possibly be implemented in wood industry value chain financial reporting. The model introduced confirmed our hypothesis and therefore represents a path to more informative and updated financial reports and provides potential associates with clearer picture of profits and costs in the wood manufacturing chain. Pre-experiment and post-experiment can serve as an extension of this paper for future research.

## References

Anić, Ivan Damir and Mustafa Nušinović (2004): "The Apple Industry in Croatia: A Value Chain Analysis Approach", Presented at Conference: An Enterprise Odyssey: "Building Competitive Advantage", Zagreb, June.

Belak, Vinko (1994): *Profitni centri i interna ekonomija poduzeća*, Zagreb: RRiF-plus.

Bititci, Umit S., Veronica Martinez , Pavel Albores and Joniarto Parung (2004): "Creating and managing value in collaborative networks", *International Journal of Physical Distribution & Logistics Management*, Vol. 34, No. 3, pp. 251-268.

Burek, Darko (2004): "Šumarstvo i prerada drva, partneri u stvaranju dodane vrijednosti", Drvno-tehnološka konferencija: izazovi, mogućnosti i ograničenja Hrvatske prerade drva i proizvodnje namještaja, Opatija, lipanj, 2004.

Croatian Chamber of Economy (2003): "Wood Processing, and wood products and furniture".

Čobanković, Kurečić, Petrić, Merlić, Štefanić and Štimac (2003): "Strategija prerađivačke industrije RH - prijedlozi i rješenja".

European Commission (2002): "Regional clusters in Europe", Observatory of European SMEs, No. 3.

Industrijska strategija (2003): <http://www.vlada.hr/Download/2003/10/09/pog15.pdf>, Vlada RH, pp. 7-8.

Ištvanić, J., I. Đukić, M. Samoščanec and M. Šahman (2001): "Povijest stanje i pravci razvitka pilanske obradbe drva u Republici Hrvatskoj", *Working paper*, Šumarski fakultet, Zagreb.

May, Robert G. (1971): "The Influence of Quarterly Earnings Announcements on Investor Decisions as Reflected in Common Stock Price Changes", *Journal of Accounting Research* (Supplement), pp. 119-171.

McKanzie, Colin R. (1999): "Trends in International Forest Management", *Abare - Outlook 99 Canberra*, report, 17/18 TH, March, <http://www.evergreen.co.nz/reports/trends.pdf>.

Mensah, Yaw M., and Robert Werner (2003): "The Capital Market Implications of the Frequency of Interim Financial Reporting: An International Analysis", Illinois International Accounting Summer Conference, June.

Nillson, Sten (2001): "The Future of the European Solid Wood Industry", Interim Report, International Institute for Applied System Analysis.

Office of Financial Management, Washington (1998): "Improving Financial Management Reporting", *Working paper*, chapter 2, <http://www.doi.gov/pfm/5year98/chap2.html>.

Official Gazette of the Republic of Croatia, No. 53/91, 1998, pp. 33/92, <http://www.nn.hr>.

Plenter, Janos (2001): "Wealth, power and economics - the cluster theory of economics", Elias Kiado, Hungary.

Sahay, B.S. (2003): "Supply chain collaboration: the key to value creation", *Work Study*, Vol. 52, No. 2, pp. 76-83.

Stickney, Clyde P (1996): *Financial reporting and statement analysis - a strategic perspective*, third edition, the Dryden Press.

Šumarski fakultet, Zavod za istraživanja u drvnoj industriji, (2003): "Nužnost strukturnih promjena u industrijskoj preradi drva", Stručni skup, *Zbornik radova*, pp. 31-38, pp 49-53.

United Nations (1994): "Accounting for sustainable forestry management", a case study, New York and Geneva.

Usenius, Arthur (2003): "Optimizing and controlling activities in complex forest-wood-end user chain ", E-business for forestry conference.

Varaždinska burza, Popis poduzeća u kotaciji, rujan, <http://www.vse.hr/kotacije/popis>

Web Summaries IAS 14: Segment Reporting, [http://www.iasb.org/uploaded\\_files/documents/8\\_63\\_ias14-sum.pdf](http://www.iasb.org/uploaded_files/documents/8_63_ias14-sum.pdf)

Web summaries IAS 31, Interests in Joint Venture, [http://www.iasb.org/uploaded\\_files/documents/8\\_63\\_ias31-sum.pdf](http://www.iasb.org/uploaded_files/documents/8_63_ias31-sum.pdf)

Wood Industry Cluster, Austria, službene internet stranice, rujan 2004, <http://www.austria.or.kr/clusters.htm>

Wood Industry Cluster, Slovenia, službene internet stranice, rujan 2004, <http://www.sloveniapartner.com>

Zagrebačka burza, Popis poduzeća u kotaciji, rujan 2004, <http://www.zse.hr/quotation.php?sessionId=-1>